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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/380,165 | 02/23/2000 | THOMAS MADER | 765 | 2264 |

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EXAMINER

PERSINO, RAYMOND B

| ART UNIT | PAPER NUMBER |
|----------|--------------|
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2682

DATE MAILED: 04/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|---------------------------------------|-------------------------------------|--|
| Office Action Summary | Application No. 09/380,165 | Applicant(s) MADER ET AL. | |
| | Examiner Raymond B. Persino | Art Unit 2682 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 November 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 15-31 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 15-31 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 February 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 15-17, 20, 21 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over STENGEL et al (US 5,265,270 A) in view of VOGT et al (US 5,339,455 A) and VANDEGRAAF (US 5,450,622 A).

Regarding claim 15, STENGEL et al discloses a radio apparatus for mobile radio, comprising a receiver part provided with an evaluation unit which controls said receiver part as a function of a predeterminable signal reception quality and an actual signal reception (abstract and column 4 lines 43-65). However, STENGEL et al does not specifically disclose that in an event of defective signal reception said evaluation unit increases a parameter selected from the group consisting of a sensitivity, a signal-to-noise ratio, and both of said receiver part, said evaluation unit being formed so that in an event of error free signal reception for a predetermined time, said evaluation unit lowers said at least one parameter of said receiver part. VOGT et al discloses that in an event of defective signal reception said evaluation unit increases a parameter selected from the group consisting of a sensitivity, a signal-to-noise ratio, and both of said receiver part, said evaluation unit being formed so that in an event of error free signal

reception, said evaluation unit lowers said at least one parameter of said receiver part (column 3 lines 6-40). VANDEGRAAF discloses the determination of error free signal reception for a predetermined time to lower a parameter (column 4 lines 7-11).

Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify STENGEL et al per VOGT et al and VANDEGRAAF. STENGEL et al identifies the need of a battery saving mode in order to conserve power and, in the event of adjacent-channel interference, to provide the necessary interference immunity. Thus there is motivation to use VOGT et al to solve the identified problem. VANDEGRAAF adds the benefit of a quality of a signal reception being determined over a predetermined time. Even though VANDEGRAAF is directed to a generating a squelch signal and not changing the sensitivity or signal-to-noise ration of the receiver, the problem and benefit of the solution are similar. In VANDEGRAAF switching the squelch signal only after a good signal is received for a predetermined period of time prevents a ping-pong effect of switching the signal on and off when the signal is remaining near the threshold. Likewise, applying VANDEGRAAF to STENGEL et al per VOGT et al prevents a ping-pong switching of the parameter.

Regarding claim 16, see the rejection of the parent claim concerning the subject matter this claim depends from. VOGT et al further discloses increasing said at least one parameter of said receiver part in an event of neighboring channel disturbance or intermodulation (column 3 lines 6-40).

Regarding claim 17, see the rejection of the parent claim concerning the subject matter this claim depends from. VOGT et al further discloses an operating mode of

increasing said at least one parameter of said receiver part to a maximum value (the switching to filter 14_N in switch 6, column 3 lines 6-40).

Regarding claim 20, see the rejection of the parent claim concerning the subject matter this claim depends from. VOGT et al further discloses that the receiver part includes at least one first filter configuration (filter 14₁) and one second filter (filter 14_N) configuration, so that said evaluation unit adds one of said filter configurations in which a higher signal-to-noise ratio of said receiver part is assured (column 3 lines 6-40).

Regarding claim 21, see the rejection of the parent claim concerning the subject matter this claim depends from. VOGT et al further discloses that the operating mode is at least one operation selected from the group consisting of adding at least one reception amplifier in said receiver part, increasing a power supply of a mixer of said receiving part to a first predetermined value, and switching over to one of filter configuration of said receiver part in which greater signal-to-noise ratio of said receiver part is assured (column 3 lines 6-40).

Regarding claim 31, see the rejection of the parent claim concerning the subject matter this claim depends from. STENGEL et al further discloses that the control of the receiver is so that energy is saved (column 4 lines 43-65).

3. Claims 18, 19, 26 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over STENGEL et al (US 5,265,270 A) in view of VOGT et al (US 5,339,455 A) and VANDEGRAAF (US 5,450,622 A) and further in view of HIRASAWA et al (US 5,369,803 A).

Regarding claim 18, see the rejection of the parent claim concerning the subject matter this claim depends from. However, neither STENGEL et al, VOGT et al, nor VANDEGRAAF disclose that the receiver part includes at least one add-on reception amplifier, so that said evaluation unit add said at least one reception amplifier in an event of defective signal reception and bypasses it in an event of error-free signal reception. HIRASAWA et al discloses that the receiver part includes at least one add-on reception amplifier, so that said evaluation unit add said at least one reception amplifier (booster to boost a weak signal) in an event of defective signal reception and bypasses it (when booster is turned off or when in portable mode) in an event of error-free signal reception (column 1 lines 46-68, column 5 lines 35-61, column 6 line 54 to column 7 line 2, and column 7 lines 37-40). Therefore it would have obvious to a person of ordinary skill in the art at the time the invention was made to modify the combination of STENGEL et al, VANDEGRAAF and VOGT et al per HIRASAWA. The modification per HIRASAWA will enhance the combination of STENGEL et al, VANDEGRAAF and VOGT et al by increasing the communicable distance between the radio apparatus and a base station. Further, the modification enhances the teachings by reducing intermodulation distortions.

Regarding claim 19, see the rejection of the parent claim concerning the subject matter this claim depends from. However, neither STENGEL et al, VOGT et al, nor VANDEGRAAF disclose that the receiver part has at least one mixer, said evaluation unit being formed so that in an event of defective signal reception said evaluation unit increases a power supply of said at least one mixer to a first predetermined value and in

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an event of error-free signal reception said evaluation unit reduces it to a second predetermined value. HIRASAWA et al discloses that the receiver part has at least one mixer (element 35 of figure 1), said evaluation unit being formed so that in an event of defective signal reception said evaluation unit increases a power supply of said at least one mixer to a first predetermined value and in an event of error-free signal reception said evaluation unit reduces it to a second predetermined value (column 5 lines 35-61, column 6 line 54 to column 7 line 2, and column 7 lines 37-40). Therefore it would have obvious to a person of ordinary skill in the art at the time the invention was made to modify the combination of STENGEL et al, VANDEGRAAF and VOGT et al per HIRASAWA. The modification per HIRASAWA will enhance the combination of STENGEL et al, VANDEGRAAF and VOGT et al by increasing the communicable distance between the radio apparatus and a base station. Further, the modification enhances the teachings by reducing intermodulation distortions.

Regarding claim 26, see the rejection of the parent claim concerning the subject matter this claim depends from. However, neither STENGEL et al, VOGT et al, nor VANDEGRAAF disclose an external power supply formed so that the operating mode can be established upon detection of said external power supply. HIRASAWA et al discloses that an external power supply (element 52 of figure 1, or in the alternative element 8 of figure 1) formed so that the operating mode can be established upon detection of said external power supply (column 5 lines 35-61, column 6 line 54 to column 7 line 2, and column 7 lines 37-40). Therefore it would have obvious to a person of ordinary skill in the art at the time the invention was made to modify the

combination of STENGEL et al, VANDEGRAAF and VOGT et al per HIRASAWA. The modification per HIRASAWA will enhance the combination of STENGEL et al, VANDEGRAAF and VOGT et al by increasing the communicable distance between the radio apparatus and a base station. Further, the modification enhances the teachings by reducing intermodulation distortions.

Regarding claim 27, see the rejection of the parent claim concerning the subject matter this claim depends from. HIRASAWA et al further discloses an additional element selected from the group consisting of a power supply adaptor (element 5 of figure 1, or in the alternative element 52 of figure 1) and a connected external antenna, so that the operating mode is established upon detection of said external power supply through said additional element (column 5 lines 35-61, column 6 line 54 to column 7 line 2, and column 7 lines 37-40).

4. Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over STENGEL et al (US 5,265,270 A) in view of VOGT et al (US 5,339,455 A) and VANDEGRAAF (US 5,450,622 A) and further in view of DE LARMINAT et al (US 5,831,256 A).

Regarding claim 22, see the rejection of the parent claim concerning the subject matter this claim depends from. VOGT et al further discloses memory so that the operating mode can be established as a function of the information contain in the memory (part of element 13, column 3 lines 6-40). However, neither STENGEL et al, VOGT et al, nor VANDEGRAAF disclose means forming an insertion slot for a chip card

and a card reader. DE LARMINAT et al discloses disclose means forming an insertion slot for a chip card and a card reader (column 2 lines 14-52). Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to utilize the memory structure of DE LARMINAT et al in the combination of STENGEL et al, VANDEGRAAF and VOGT et al. The use of a removable card will allow for content of the memory to be easily replaced.

5. Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over STENGEL et al (US 5,265,270 A) in view of VOGT et al (US 5,339,455 A) and VANDEGRAAF (US 5,450,622 A) and further in view of VAN KESSEL et al (US 4,430,609 A).

Regarding claim 23, see the rejection of the parent claim concerning the subject matter this claim depends from. However, neither STENGEL et al, VOGT et al, nor VANDEGRAAF disclose a push button switch by which the operating mode can be established. VAN KESSEL et al discloses a push button switch by which the operating mode can be established (column 5 line 63 to column 6 line2). Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to utilize a push button switch by which the operating mode can be established. VOGT et al teaches of the switching of filters and VAN KESSEL et al provides for the push button switching of a group of controllable switches. The arrangement will help reduce switching voltage errors.

6. Claims 24, 25 and 28-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over STENGEL et al (US 5,265,270 A) in view of VOGT et al (US 5,339,455 A) and VANDEGRAAF (US 5,450,622 A) and further in view of an examiner's official notice.

Regarding claims 24 and 25, see the rejection of the parent claim concerning the subject matter this claim depends from. However, neither STENGEL et al, VOGT et al, nor VANDEGRAAF disclose means for receiving a request by a base station, so that the operating mode can be established as a function of the request by the base station and means for sending back a signal sent previously to the radio apparatus.

Nevertheless, the examiner takes official notice that it was known in the art at the time the invention was made to have a means for receiving a request by a base station, so that the operating mode can be established as a function of the request by the base station and means for sending back a signal sent previously to the radio apparatus.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to have a means for receiving a request by a base station, so that the operating mode can be established as a function of the request by the base station and means for sending back a signal sent previously to the radio apparatus. This allows for the assistance of a remote unit to ensure that the ideal operating mode is used.

Regarding claims 28 and 29, see the rejection of the parent claim concerning the subject matter this claim depends from. However, neither STENGEL et al, VOGT et al, nor VANDEGRAAF disclose a sensor arranged so that the operating mode is

established as a function of a measured value ascertained by said sensor; and further comprising a battery connected to the radio apparatus, said sensor being formed so as to detect a charge of said battery, so that the operating mode is established as a function of the charge of said battery detected by said sensor. Nevertheless, the examiner takes official notice that it was known in the art at the time the invention was made to have a sensor arranged so that the operating mode is established as a function of a measured value ascertained by said sensor; and further comprising a battery connected to the radio apparatus, said sensor being formed so as to detect a charge of said battery, so that the operating mode is established as a function of the charge of said battery detected by said sensor. Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to have a sensor arranged so that the operating mode is established as a function of a measured value ascertained by said sensor; and further comprising a battery connected to the radio apparatus, said sensor being formed so as to detect a charge of said battery, so that the operating mode is established as a function of the charge of said battery detected by said sensor. This allows the operating mode to be tied to the amount of power left in the battery so that a battery may be utilized.

Regarding claims 30, see the rejection of the parent claim concerning the subject matter this claim depends from. However, neither STENGEL et al, VOGT et al, nor VANDEGRAAF disclose a data processing unit; and an interface provided for connecting said data processing unit, so that the operating mode is established as a function of data transmitted to the radio apparatus via said interface. Nevertheless, the

examiner takes official notice that it was known in the art at the time the invention was made to have a data processing unit; and an interface provided for connecting said data processing unit, so that the operating mode is established as a function of data transmitted to the radio apparatus via said interface. Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to have a data processing unit; and an interface provided for connecting said data processing unit, so that the operating mode is established as a function of data transmitted to the radio apparatus via said interface. Having a device external to the radio apparatus informing the radio apparatus that the external device is connected eliminates the need of a sensor on the radio apparatus indicating such, thus saving cost.

Response to Arguments

7. Applicant's arguments filed 11/17/2004 have been fully considered but they are not persuasive. The applicant argues that VANDEGRAAF fails to disclose the solution of checking signal quality for a certain predetermined time and lowering a parameter of the receiver part when the signal quality is good for this predetermined time. The examiner disagrees, because VANDEGRAAF teaches that when a FM carrier of sufficient signal strength is detected for beyond a predetermined period of time...a squelch threshold setting of a comparator is lowered (see column 4 lines 7-11). The applicant further states that VANDEGRAAF also does not teach the re-change of the parameter in the case of deceptive reception. It is noted that the claim language does

not include a limitation that the parameter be re-changed and as such it is not required for the prior art to teach that subject matter. In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, STENGEL et al identifies the need of a battery saving mode in order to conserve power and, in the event of adjacent-channel interference, to provide the necessary interference immunity. Thus there is motivation to use VOGT et al to solve the identified problem. VANDEGRAAF adds the benefit of a quality of a signal reception being determined over a predetermined time. Even though VANDEGRAAF is directed to a generating a squelch signal and not changing the sensitivity or signal-to-noise ratio of the receiver, the problem and benefit of the solution are similar. In VANDEGRAAF switching the squelch signal only after a good signal is received for a predetermined period of time prevents a ping-pong effect of switching the signal on and off when the signal is remaining near the threshold. Likewise, applying VANDEGRAAF to STENGEL et al per VOGT et al prevents a ping-pong switching of the parameter. For the preceding reasons the examiner is maintaining the rejection.

Conclusion

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Raymond B. Persino whose telephone number is (571) 272-7856. The examiner can normally be reached on Monday-Thursday from 8:00 AM to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vivian C. Chin can be reached on (571) 272-7848. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Raymond B. Persino
Examiner
Art Unit 2682

RP

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